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Paraoesophageal hiatus hernia: surgery for all ages

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The results of surgery for paraoesophageal hiatus hernia over a 10-year period have been studied. From a group of 26 symptomatic patients, elective repair has been undertaken in 20 (mean age of 65.6 years) and emergency repair in four (mean age of 73.1 years). Emergency surgery was associated with a fivefold increase in mortality, and anatomical repair gave a satisfactory result in 90% (CI 77–100) of survivors. Surgical treatment should be considered for all symptomatic patients with paraoesophageal hiatus hernia.

Paraoesophageal hiatus hernia is an anatomical abnormality which is known to have life-threatening complications *(1)*. The recommended treatment to prevent these complications is surgery, medical treatment having nothing to offer. As the gastro-oesophageal junction is in its normal position, the cardiac sphincter mechanism is usually intact and gastro-oesophageal reflux is not the major problem. In view of this, an anatomical repair should give good results with few or no residual symptoms. Many of the patients presenting with this condition are elderly, and there is a reluctance among some clinicians to refer them for surgical assessment and treatment. This reluctance may stem from a fear that the treatment may be associated with an unacceptable level of morbidity and mortality.

The aim of the present study has been to show both the safety of and the necessity for elective surgery for this condition at all ages and to determine if anatomical repair alone is adequate treatment.

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Materials and methods

All cases of paraoesophageal hiatus hernia under the care of one consultant (JGT) were studied. Details of the patient's age, sex, nature and duration of symptoms and, where appropriate, postoperative course and symptoms were recorded. In cases admitted as emergencies with incarceration of the hernia, first-line treatment was nasogastric intubation and aspiration, with intravenous fluid replacement. When intubation was unsuccessful, emergency surgery was undertaken. In those cases where decompression was successful, surgical repair was undertaken on the next available elective operating list.

In all cases an anterior crural repair and fundopexy, attaching the fundus to the underside of the left hemidiaphragm, was performed using non-absorbable sutures. In the first six cases this was combined with omental mobilisation and fixation of the transverse colon in the left subphrenic space as described by Tanner *(2)*. Operative mortality was defined as death within 30 days of surgery.

All patients were followed in outpatients. At each visit the patients were assessed and graded as I, asymptomatic; II, minor symptoms requiring no treatment; III, minor symptoms controlled by medical treatment; or IV, minor symptoms not controlled on medical treatment, major symptoms or recurrence of the hernia.

Results

Between 1980 and 1990, 26 symptomatic patients were found to have a paraoesophageal hiatus hernia, of whom 24 have undergone repair of the hernia. One refused

Table I. Symptoms: type

Epigastric pain	14
Vomiting	5 (2)
Dysphagia	6 (3)
Reflux	2
Chest pain	1

Figures in brackets refer to emergency cases

surgery. The final patient was found to have a coincidental adenocarcinoma of the lower oesophagus and underwent a transhiatal oesophagectomy from which she made an uneventful recovery.

The 24 patients included 7 men and 17 women. There were 20 elective cases, 6 men and 14 women with a mean age of 65.6 years, and four emergency admissions, three of whom were female with a mean age of 73.1 years. Of the 20 elective cases, 19 were attending for the first time and one had undergone previous antireflux surgery. The symptoms at presentation are detailed in Table I. The mean duration of symptoms in the elective cases was 34.1 months (range 3–120 months). For the four emergency cases, the mean duration of symptoms was 4.0 months (range 0–12 months).

Of the four emergency admissions, three were decompressed by nasogastric intubation, the final patient requiring emergency surgery. The postoperative course was uneventful in 18 of the 24 patients. One patient in the elective group and three in the emergency group developed postoperative pneumonia. There were two deaths. One patient in the elective group developed an irreversible dysrhythmia after a myocardial infarct 2 days after surgery. The second death was in the patient admitted as an emergency who failed to decompress after nasogastric intubation. This patient developed multisystem failure after emergency surgery and died on the 5th postoperative day.

Follow-up in the groups ranges from 6 months to 8 years. The long-term results are given in Table II. This was grade I in 16 and grade II in three who have minor reflux symptoms. One patient has reflux symptoms which are controlled by medical treatment with H_2 receptor antagonists and the patient, who had undergone previous antireflux surgery, developed a recurrence of his paraoesophageal hernia within 6 months of operation. The final patient developed an adenocarcinoma of the lower third of the oesophagus 2 years after surgery.

Discussion

Paraoesophageal hiatus hernia accounts for between 1% and 5% of all hiatus hernias coming to surgery *(3)*. It is a condition which has potentially serious complications: dysphagia, haemorrhage, incarceration and gastric gangrene. It has been the standard teaching for some years that elective repair be undertaken whenever feasible. The advanced age of many of the patients has made some clinicians reluctant to adopt this policy because of a fear that it would result in an unacceptable level of morbidity and mortality.

Surgery is the only treatment which can control the hernia, improve symptoms and reduce the risk of the catastrophic and fatal complications seen in up to 26% of the patients managed medically *(4,5)*. Elective repair has a mortality of between 2% and 6%, with most series having only 1 or 2 deaths *(3,6)*. Delaying repair until catastrophic complications occur increases mortality *(1)*. For repair after emergency admission, the mortality rate increases between four- and sixfold to between 25% and 33%.

Once the necessity for surgical intervention has been accepted, the type of surgery becomes a matter of debate. In true paraoesophageal hiatus hernia the cardio-oesophageal junction is in its usual position below the diaphragm and the cardiophrenic ligament is intact. Under these circumstances, an anatomical repair should give good results as the cardio-oesophageal sphincter will be intact. The results from this and previous series confirm this view. Reflux is not a common problem after the hernia has been repaired, even though some reflux may be present preoperatively. It has been suggested that a selective approach should be adopted, using an anatomical repair for most cases and restricting additional antireflux surgery to those with objective evidence of an abnormal sphincter as assessed on preoperative manometry *(7)*. In the four patients in the present study who had symptoms of reflux after anatomical repair, review of the notes showed that reflux symptoms were a more prominent feature than in the rest of the group.

Table II. Postoperative results

Visick	*Number*	*Overall percentage (CI)*	*Percentage of survivors (CI)*
I	16	67 (48–86)	76 (58–94)
II	3	13 (0–26)	14 (0–28)
III	1	4 (0–15)	5 (0–14)
IV	1	4 (0–15)	5 (0–14)
Carcinoma	1	4 (0–15)	
Postoperative deaths	2	8 (0–19)	

CI = 95% confidence intervals

Therefore, it may be possible to predict those in whom antireflux surgery should be considered.

The present study confirms both the safety and effectiveness of anatomical repair of paraoesophageal hiatus hernia in an elderly group of patients. Delaying treatment until complications supervene is associated with an unacceptable increase in the risks associated with surgery. Surgery should be considered in all patients with a symptomatic paraoesophageal hiatus hernia, and age, of itself, should not be a contraindication.

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Assessor's comment

This paper does well to remind us that surgery offers excellent long-term results in this condition for which medical treatment has little to offer. It illustrates, too, a fact to which we may frequently have to draw attention now that Audit has become fashionable: postoperative deaths are rarely attributable to surgery. The sole patient who died after elective surgery sustained a myocardial infarct; perhaps this was precipitated by anaesthesia and surgery, but there must have been pre-existing disease of the coronary arteries. The second death (after emergency admission) certainly qualifies as a surgical death; but one might make the point that it was caused by continuing too long with non-surgical management.

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